

## AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph at page 3, lines 18-20, as follows:

**FIGURE 2** is a detailed side elevation view, in section, of an ~~educator~~ eductor from the downhole multi-phase twin screw pump illustrated in **FIGURE 1**.

Please amend the paragraphs at page 3, line 36 through page 6, line 4 as follows:

### Structure and Relationship of Parts:

Referring to **FIGURE 1**, downhole multi-phase twin screw pump 10 includes a housing 12 having an intake end 14, an output end 16, and a fluid flow passage 18 that extends between intake end 14 and output end 16. Twin pumping screws 20 are disposed in fluid flow passage 18. A supplementary liquid channel 22 extends through housing 12 in fluid communication with twin pumping screws 20, preferably near intake end 14 of housing 12. A liquid trap 24 is provided that is in communication with fluid flow passage 18. Referring to **FIGURES 1** and **2**, liquid trap 24 uses an ~~educator~~ eductor 26 to capture a portion 28 of a liquid stream 30 being moved along fluid flow passage 18 by twin pumping screws 20 and feeds that portion 28 of liquid stream 30 as supplementary liquid 32 through supplementary liquid channel 22 to one of twin pumping screws 20, thereby enhancing a liquid seal around twin pumping screws 20.

### Operation:

The use and operation of downhole multi-phase twin screw pump will now be described with reference to **FIGURES 1** through **2**. Referring to **FIGURE 1**, to adapt downhole multi-phase twin screw pump 10 for use in wells having a high gas content, supplementary liquid channel 22 is positioned in housing 12 of downhole multi-phase twin screw pump 10 in fluid

communication with twin pumping screws 20. Referring to **FIGURES 1 and 2**, as liquid stream 30 is moved along fluid flow passage 18 by twin pumping screws 20, liquid trap 24 uses ~~educator~~ eductor 26 to capture portion 28 of liquid stream 30 and directs that portion 28 of liquid stream 30 into supplementary liquid channel 22. Supplementary liquid 32 is then fed through supplementary liquid channel 22 to twin pumping screws 20, thereby enhancing a liquid seal around twin pumping screws 20.

#### Structure and Relationship of Parts:

Referring to **FIGURE 3**, downhole multi-phase twin screw pump 100, in a combination which includes a housing 112 having an intake end 114, an output end 116, and a fluid flow passage 118 that extends between intake end 114 and output end 116. Twin pumping screws 120 are disposed in fluid flow passage 118. A supplementary liquid channel 122 extends through housing 112 in fluid communication with twin pumping screws 120 near intake end 114 of housing 112. A liquid trap 124 is positioned adjacent a well head 126 of well 128. This differs from first embodiment 10 in which liquid trap 24 was provided within housing 12. As with first embodiment 10, liquid trap 124 of second embodiment 100 also uses an ~~educator~~ eductor 130 to capture a portion 132 of a liquid stream 134 being moved through well 128 by twin pumping screws 120 and feeds that portion 132 of liquid stream 134 as supplementary liquid 136 through supplementary liquid channel 122 to twin pumping screws 120, thereby enhancing a liquid seal around twin pumping screws 120.

#### Operation:

The use and operation of second embodiment of downhole multi-phase twin screw pump will now be described with reference to **FIGURE 3**. Second embodiment of downhole multi-phase twin screw pump 100 operates in the same fashion as first embodiment 10. To adapt

downhole multi-phase twin screw pump 100 for use in wells 128 having a high gas content, supplementary liquid channel 122 is positioned in housing 112 of downhole multi-phase twin screw pump 100 in fluid communication with twin pumping screws 120. Although it is preferable to have supplementary liquid channel 122 positioned near intake end 114 of downhole multi-phase twin screw pump 100, practical considerations may result in supplementary liquid channel only extending partially down housing 112. Liquid stream 134 is moved along fluid flow passage 118 by twin pumping screws 120 and exits housing 112 and passes through wellhead 126 into liquid trap 124 that is adjacent to wellhead 126 of well 128. Liquid trap 124 then uses ~~educator~~ eductor 130 to capture portion 132 of liquid stream 134 and directs that portion 132 of liquid stream 134 through a flow line 138 into supplementary liquid channel 122 of housing 112. Supplementary liquid 136 is then fed through supplementary liquid channel 122 to twin pumping screws 120, thereby enhancing a liquid seal around twin pumping screws 120.